



City of Kingman, Arizona

Classification: Electrician II

Department: Public Works

Accountable To: Crew Leader or Streets Superintendent OR
Construction Maintenance Supervisor or Water Superintendent

Created/Revised Date: February 2016

FLSA Status: Non-Exempt **Salary Grade:** 212 **Band:** C **EEO4:** 7

GENERAL DESCRIPTION OF POSITION

Performs advanced journey trades work in the installation, maintenance and repair of electrical devices and equipment. The fundamental reason this classification exists is to perform highly skilled level electrical work involving installation, inspection, maintenance, alteration and repairs of electronic equipment, controls, devices and components in accordance with standard practices of the electrical trade. Maintains an on-call status to ensure the safe operation and effective utilization of electronic controls, devices and components within area of assignment; performs other duties as required within the scope of the classification.

This position is distinguished from the Electrician classification due to more responsibility and involvement in the more complex and technical work situations, the independence with which duties are performed, project responsibility, the flexibility to be able to assist in other areas of the City of Kingman and decision-making authority within scope of project.

Streets – Traffic Control/Signage involving installation, inspection, maintenance, alteration and repairs of electronic traffic signals and devices, pole-mounted outdoor lighting, associated mechanical equipment and solid-state traffic control devices in accordance with National Electric Code (NEC), Manual on Uniform Traffic Control Devices (MUTCD) and any other applicable state and federal guidelines. Maintains an on-call status to ensure the safe operation of the traffic signals, traffic control devices, and City lighting systems; performs other duties as required within the scope of the classification.

Utilities – Water/Wastewater involving installation, inspection, maintenance, alteration and repairs of electrical equipment, components, and specialty Water and Wastewater treatment plant electrical systems for the City of Kingman Public Works Department and work is performed in accordance with standard practices of the electrical trade. Maintains an on-call status to ensure the safe operation of the plants and facilities; performs other duties as required within the scope of the classification.

SUPERVISION RECEIVED

Work is performed with considerable independence under the general supervision of a crewleader, construction maintenance supervisor or superintendent. Work is reviewed by meeting of department/division standards, results obtained and for conformance with technical standards.

SUPERVISION EXERCISED

May provide instruction, daily work assignments within scope of project, and review work completed of others assigned to assist with projects, and provides technical resource advice to other employees on an assignment basis. May supervise temporary employees, community service workers, and DOC Inmate workers as directed, or as assigned by Superintendent.

ESSENTIAL DUTIES & RESPONSIBILITIES Essential Functions are not intended to be an exhaustive list of all responsibilities, duties and skills. They are intended to be accurate summaries of what the job classification involves and what is required to perform it.

- Locates and repairs electrical problems in facilities and systems in accordance with mechanical and electrical codes; works independently, and makes appropriate decisions based on work experience and level of expertise; duties may vary according to job assignment.
- Performs electrical repair and maintenance activities with scope of authority, and in accordance with all safety regulations and procedures; notifies supervisor of repair problems beyond scope of authority and expertise.
- Maintains electrical equipment and systems using technical skills, mechanical proficiency and knowledge of electrical systems; inspects work to verify compliance to quality and safety standards.
- Locates short and open circuit conditions in wiring systems.
- Performs electronics repair work on a wide variety of electronic equipment.
- Inspects defective electronic equipment to determine malfunctions.
- Reads and interprets blueprints, schematic diagrams, logic charts, and manufacturer's manuals to isolate malfunctioning components.
- Inspects, tests, calibrates, installs, maintains and repairs electrical systems, components, and devices; reads and interprets diagrams, schematics and blueprints; prepares project cost estimates.
- Examines equipment malfunctions to determine cause and troubleshoot actual and potential problems.
- Examines components to be repaired and determines the proper repair techniques; studies schematics to determine needed repairs or replacement of components; replaces faulty components, and tests finished job to determine system capability; updates wiring diagrams as needed.
- Inspects a variety of electrical equipment; assures equipment functions meet job specifications and technical codes; maintains and updates daily log of activities; keeps current on issues and trends in electrical and electronic equipment.
- Documents information on preventive maintenance file on electrical equipment and machinery and monitors a preventative maintenance program.
- Operates aerial equipment and pneumatic equipment in the installation and repair of electrical equipment.
- Utilizes proper safety precautions in all work performed; reports safety hazards, equipment problems and emergency situations; responds to emergencies as needed.
- Responds to emergency call outs.
- Operates crane truck for removal and placement of poles and equipment.
- Operates a bucket truck for aerial work.
- Replenishes electrical parts and supplies.
- Maintains parts inventory.
- Performs construction and maintenance work as needed or assigned.
- Performs mechanical repairs on industrial and automotive equipment as required.
- Cleans and maintains tools and equipment.
- Performs all duties in conformance to appropriate safety and security standards.
- Supervises and leads DOC Inmate Labor as trained and assigned.
- Communicates and acts in a professional manner with the public, co-workers, and work contacts.
- Provides excellent customer service to all contacts.
- Regular attendance is an essential function of this job to ensure continuity.
- May be required to work early mornings, evenings, nights, holidays or weekends as needed.
- Performs all work duties and activities in accordance with City policies and procedures; follows safety policies and practices, works in a safe manner, and reports unsafe activity and conditions.
- Performs related work as required.

Streets – Traffic Control/Signage

- Diagnoses and repairs traffic signal systems using hand tools, power tools, and electrical diagnostic equipment; performs repairs on poles, signal heads, signs, vehicle sensors, cabinet-electronics and microprocessors, switches, communications, timing and all other subsystems.
- Demonstrates ability to assess, determine the extent of maintenance required and time to accomplish a specific repair to replace a malfunction with an operable system.
- Installs, alters, maintains, diagnoses, and repairs electrical wiring systems and equipment, both high and low voltage (i.e., traffic signal systems, traffic control devices, electrical boxes, motors, streetlights, and other electronic

appliances and housings).

- Replaces worn and/or damaged components in traffic control devices and electrical streetlight fixtures.
- Installs and maintains electrical motors, signal heads, signal cables, span wire, and traffic signal poles and pedestals.
- Performs scheduled preventative maintenance on traffic signals and street lighting through visual inspections, hardware and software equipment replacement, group re-lamping, and equipment testing.
- Participates in the blueprint plan review process for lighting and signal projects.
- Installs and maintains temporary traffic control as needed.

Utilities: Water/Wastewater

- Install, repairs, calibrates, and updates electrical wiring, fixtures, instruments, motors, pumps, generators, and specialty equipment and components; discusses scope of problems with supervisor, and recommends repair methods and techniques to correct problems and maintains system stability.
- Installs and maintains water pump and booster stations consisting of various horsepower, from functional to several hundred horsepower.
- Installs and maintains transformers, substations and related control equipment (motors, generators, pumps, blowers, fans, etc.).
- Confers with mechanics, technicians, plant operations personnel, and outside services to coordinate planned installations, repairs, and preventive maintenance work.

PERIPHERAL DUTIES:

- Maintains effective contact with other city departments when making electrical repairs.
- Maintains effective contact with vendors to obtain electrical parts and supplies.
- Performs related duties as required.
- Performs special assignments as requested.
- May serve on a variety of employee committees.
- Performs electrical maintenance of city buildings as needed.

DESIRED MINIMUM QUALIFICATIONS:

Education and experience:

- Graduation from high school diploma or GED equivalent supplemented by technical/trade school coursework or apprenticeship in electrical trades work.
- Completion of a recognized four year electrical apprenticeship program, or equivalent training, or three years of experience as a skilled Electrician/Traffic Signal Technician/Utility Electrician performing two (2) or more years of electrical work in commercial/industrial environment, preferably in public sector traffic control, signage and/or utilities (water, wastewater). Any combination of experience and training which demonstrates the knowledge and experience to perform the work.

Necessary Knowledge, Skills and Abilities:

Knowledge: Thorough knowledge and skill in use of methods, materials and tools used in electrical construction and maintenance work, including installation of all sizes of electrical conduit, cables, wires, switches, automatic starting equipment, and pole line construction; Occupational hazards and necessary safety precautions of the trade; National Electric Code and relevant City codes; Considerable knowledge of the principles of electrical theory as applied to electrical circuits and wiring systems and ability to apply this knowledge to work situations; Test equipment and testing procedures used in the calibration and repair of digital and analog electronic equipment; Interpreting technical instructions and analyzing complex variable; Use of computers and basic software applications; Appropriate use of lock out/tag out safety procedures

Streets – Traffic Control/Signage: Considerable knowledge of methods, procedures, materials, and tools related to the maintenance and installation of electrically operated traffic control devices, electro-mechanic traffic control devices, and electricity as it relates to traffic control devices; Principles and theories of electronics as related to the repair of digital electronic traffic control devices and Working knowledge of work zone traffic control signing and flagging in accordance with MUTCD standards.

Utilities – Water/Wastewater: Considerable knowledge of methods, procedures, materials and tools related to the maintenance and installation of electrical components, valves, pumps, electrical motors and controls utilized in water/wastewater facilities and systems; Functions and servicing requirements of water/wastewater plant machinery and equipment; Repair and maintenance techniques for water/wastewater facilities; SCADA, electronic systems, instrument and control systems.

Skills: Skill in performing advanced journey-level trades electrical installation and maintenance and locating and adjusting faulty or defective electrical systems and equipment; Care and use of hand tools, utility locating equipment and other related equipment necessary to perform various electrical repair tasks in a safe and effective manner; Identifying maintenance needs and mechanical and electrical problems and correcting or referring for repair; Troubleshooting problems; Preparing and maintaining accurate records; Using a computer and related software applications; Working in a team environment; Providing customer service; and Communication, interpersonal skills as applied to interaction with coworkers, supervisor, the general public, etc. sufficient to exchange or convey information and to receive work direction; Application of first aid methods including artificial respiration.

Abilities: Ability to read, interpret, and analyze applicable federal, state, and city codes, Traffic Signal and Pole Lighting manuals, industry periodicals and electrical diagrams, schematics, blueprints, specifications and sketches; Install, inspect, maintain and repair traffic signal and pole-mounted outdoor lighting; Perform electrical system diagnostics; operate and work from an aerial bucket truck; Work at heights greater than 10 feet; Work according to prescribed safety and professional standards; Direct jobs safely, efficiently and economically; Understand and follow complex oral and written instructions; Work under varying weather conditions; Perform basic mathematical calculations; Respond to after hours and emergency calls after normal working hours and on weekends and holidays; Distinguish between the full range of colors in the color spectrum to work with electrical wires, electronic components, traffic signal and street lights; Work safely without presenting a direct threat to self or others; Observe and adhere to proper safety precautions; Perform associated manual labor to complete work; Establish effective, cooperative working relationships with other employees, supervisors and the public; Wear OSHA required personal protective equipment including safety restraints, hard hat.

SPECIAL REQUIREMENTS

- Valid Arizona Commercial Driver's License at a minimum level of Class B or ability to obtain one within six (6) months of hire to position. Assigned to Streets – Traffic Control Signage: Class A (no automatic only restriction) preferred.
- May require certification or demonstrated competence as electrician
- Based on assignment, may be required to participate and obtain NIMS (National Incident Management System) training certifications.

Streets – Traffic Control/Signage

- Possess, at a minimum, Level One International Municipal Signal Association (IMSA) Traffic Signal Certification and will be required to obtain Level Two certification within 12 months of hire to the position.
- Possess International Municipal Signal Association (IMSA) Work Zone Safety Certification.

Utilities – Water/Wastewater

- May be required to possess Arizona Grade 1 Water Treatment or Wastewater Treatment Operator Certification.

WORK ENVIRONMENT

The work environment characteristics attached to the job description are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. See Physical Demands.

Expected Behavior/Quality of Services:

Excellence is the responsibility of everyone at the City of Kingman. We lead by our core values in constant pursuit of excellence:

Commitment – Dedicate oneself to consistent and excellent public service.

Innovation – Implement unique, creative and cost-effective solutions.

Communication – Communicate in a positive, honest and productive manner.

Integrity – Adherence to high ethical standards.

Diversity – Promote inclusiveness and impartiality throughout the organization.

Personal Responsibility – Take initiative to achieve excellence and accept accountability, uphold confidentiality, know when to report indiscretions and inappropriate actions even when it may be uncomfortable to do so, take responsibility for your work environment.

Respect – Demonstrate a high regard for others, support each other.

Teamwork – Promote and encourage cooperative efforts, open communication and trust, encourage positive feedback.

All City employees are expected to conduct themselves consistent and in support with the above values.

SELECTION GUIDELINES:

Submittal/review of employment applications, screening/rating of application in relation to training and experience to job description and overall presentation and job history/stability, oral interview, reference and background check. Supplemental job related tests may be required.

DISCLAIMER:

The above statements are intended to describe the general nature and level of work being performed by individuals assigned to this position. They are not intended to be an exhaustive list of all responsibilities, duties, and skills required of personnel in this position. This job description is subject to change as the needs and requirements of the position changes.

EMPLOYEE SIGN OFF:

I have read through the job description and have a good understanding of the requirements for my performance in this position and find it to be an accurate description of the demands of this position. I acknowledge it is incumbent upon me to seek clarification from my supervisor/manager for any questions I may have regarding the requirement/responsibilities of my position. I also acknowledge that I can fulfill the essential functions of my position. Should I need to seek reasonable accommodations, I acknowledge I will contact my supervisor/manager or Human Resources to pursue options.

Employee Signature: _____ **Date:** _____

Employee Printed Name: _____